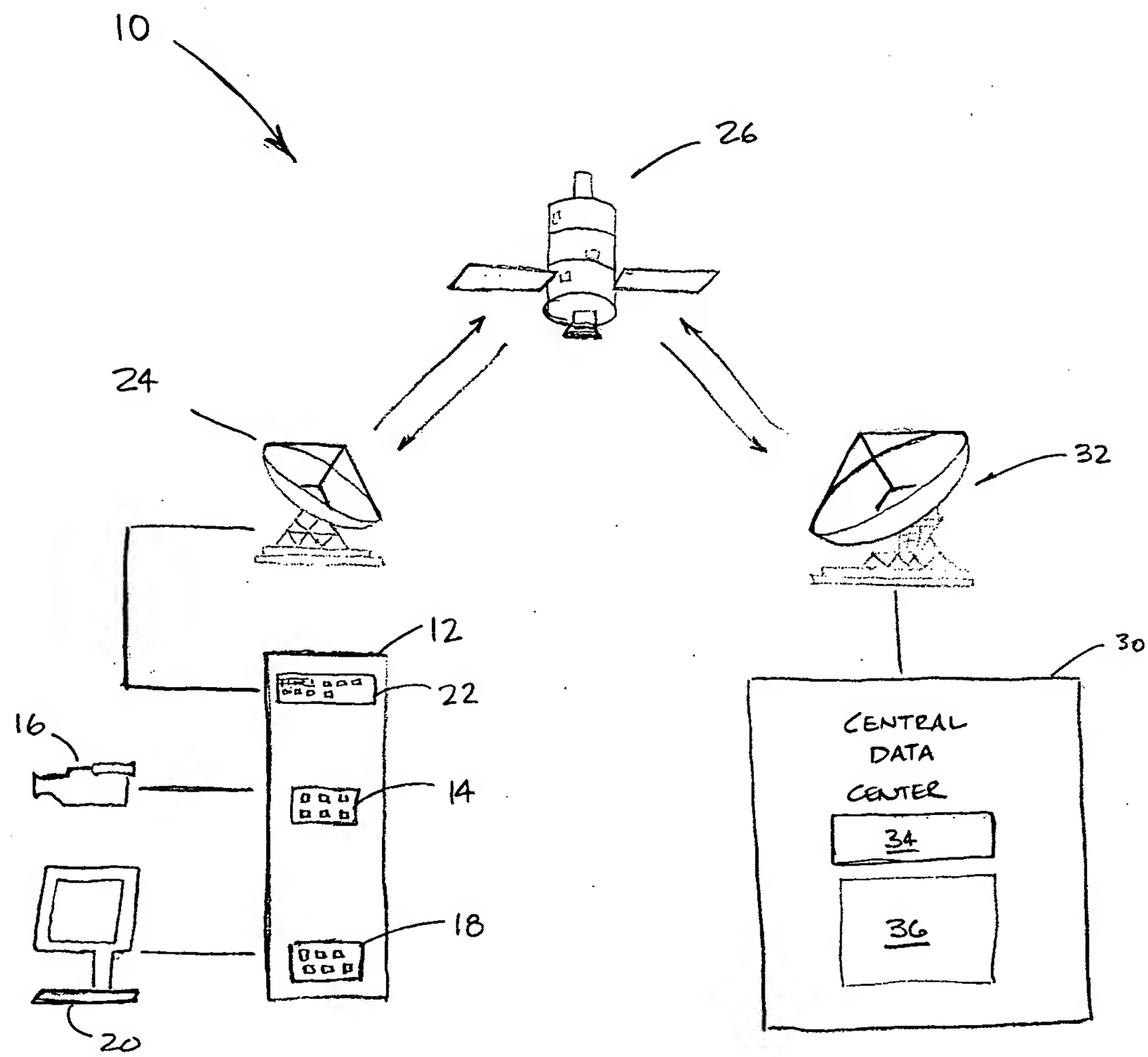

FIG. 1

Fig. 2

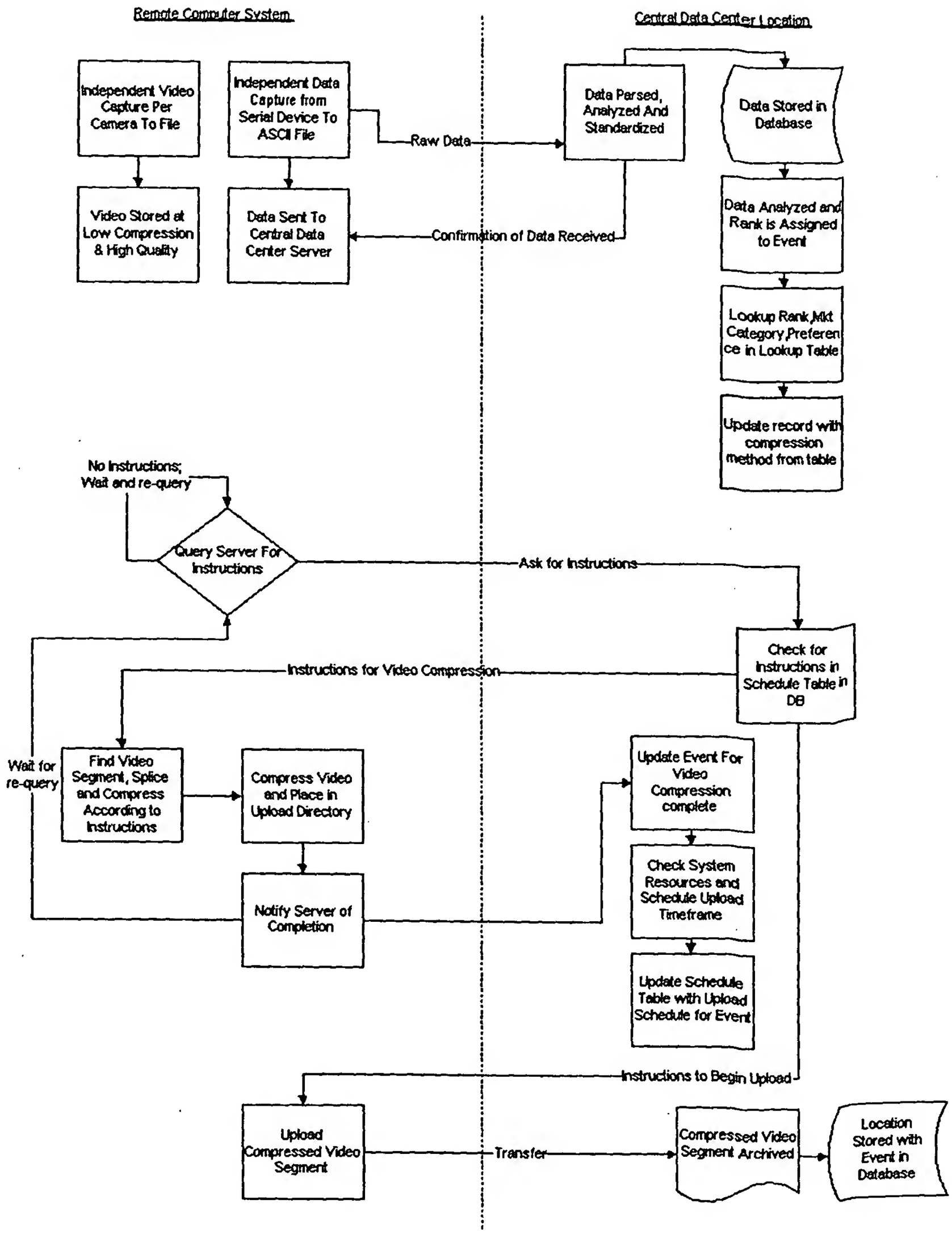
Remote Computer System
Central Data Center Location
Independent Video Capture Per Camera To File
Independent Data Capture from Serial Device To ASCII File
Raw Data
Data Parsed, Analyzed And Standardized
Data Stored in Database
Video Stored at Low Compression & High Quality
Data Sent To Central Data Center Server
Confirmation of Data Received
Data Analyzed and Rank is Assigned to Event
Lookup Rank,Mkt Category,Preference in Lookup Table
Update record with compression method from table
No Instructions; Wait and re-query
Query Server For Instructions
Ask for Instructions
Check for Instructions in Schedule Table in DB
Instructions for Video Compression
Wait for re-query
Find Video Segment, Splice and Compress According to Instructions
Compress Video and Place in Upload Directory
Notify Server of Completion
Update Event For Video Compression complete
Check System Resources and Schedule Upload Timeframe
Update Schedule Table with Upload Schedule for Event
Instructions to Begin Upload
Upload Compressed Video Segment
Transfer
Compressed Video Segment Archived
Location Stored with Event in Database

Fig. 3

Calculate Normal Distribution % for all Standard Events	Using Standard Distribution model based on frequency distributions. Ranking based on percentile.
Calculate Normal Distribution % for all Standard Parameters	Use Frequency distribution to calculate percentiles within event types as well as globally across event types.
Calculate Normal Distribution for Standard Parameter Values	Calculate standard deviation for value parameters and frequency distribution for text parameter values. Use standard deviation to calculate factor used for 'normal' and then the amount of deviation for the ranking.
Generate Modifiers for Market Category	Market category modifiers affect the curvature of the line and how steep the curvature is. The less curvature, the more quality and less compression on average are used for the middle ranks (ex. 3-7). Certain market categories will use more curvature because there are more transactions per day (quick service) or the video required for high level events must be high quality and of more length (security applications). Also, the greater the amount of data available from the serial device, the shallower the curve because the analysis reduces the risk of unnecessary video
Generate Modifiers for Unit Types	Unit Type Modifier indicates the percentage of the maximum slope of the curve. The maximum slope indicates the highest amount of bandwidth necessary to meet the curve. The lower the slope, the less high-quality video is necessary for higher ranked events even though lower ranked events are affected less.
Generate Allocation Curve Equations Per Customer	Basic Equation: y=mx+b for maximum slope line where m=slope calculated from minimum kilobyte value and maximum kilobyte value and b=y intercept (minimum kilobyte value) Modified Equation: y=[slope modifier]*mx + b where modifier is derived from unit type and preference values Final Curve Equation: y=[sm]*mx^[power]*[x/10] + b where power is derived from market category & preferences Average Event Size in Kb calculated based on # locations and monthly budget determining downstream bandwidth
Generate Max/Min Kb size per rank level based on Curvature	Max kilobyte size generated using customer maximum budget & total locations on frequency and channel. Minimum kilobye size generated using customer preferences and unit types for compression options with media encoder
Populate lookup table for Market Category/Unit Type/Preference with compression method for each rank	Each compression curve will be different based on Market category, unit type and customer preference.

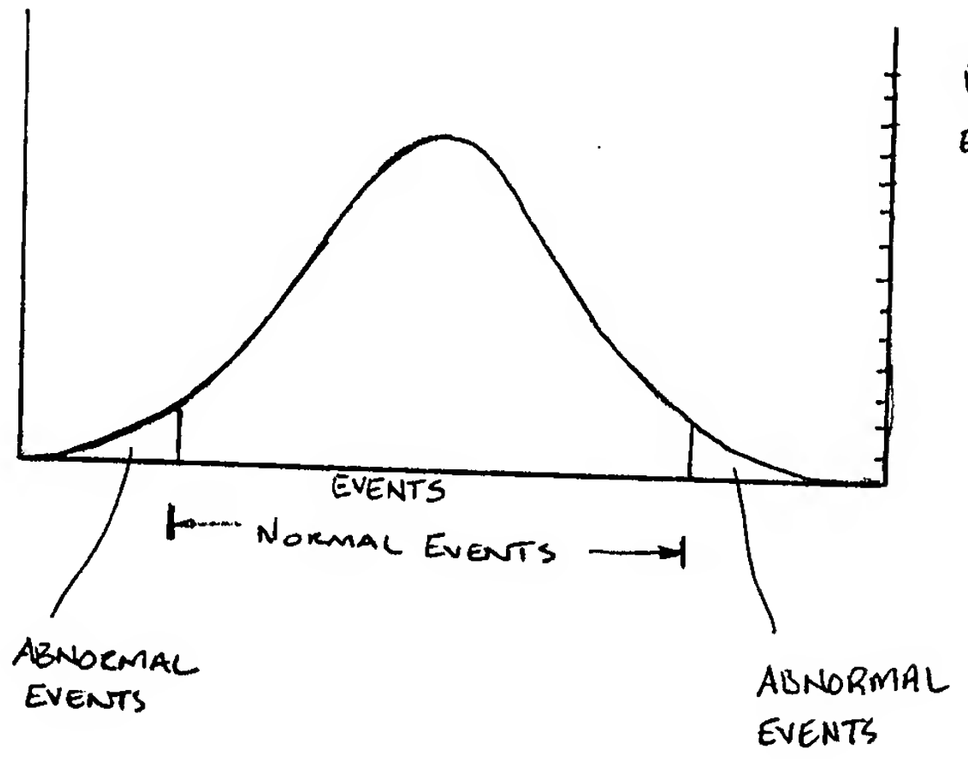
PROBABILITY OF
EVENT HAPPENING
EVENTS
NORMAL EVENTS
ABNORMAL
EVENTS
ABNORMAL
EVENTS

FIG. 4

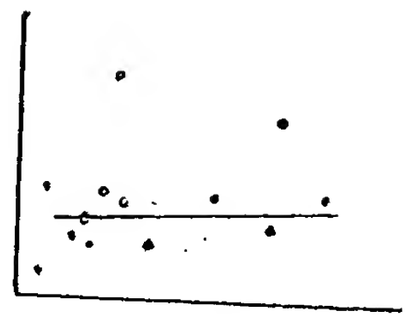

FIG. 5

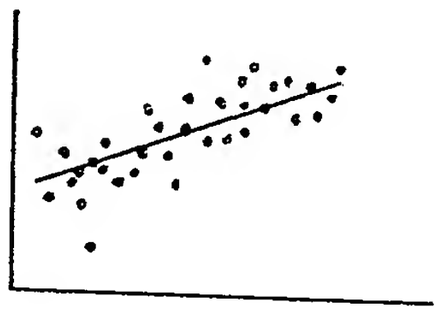

FIG. 6

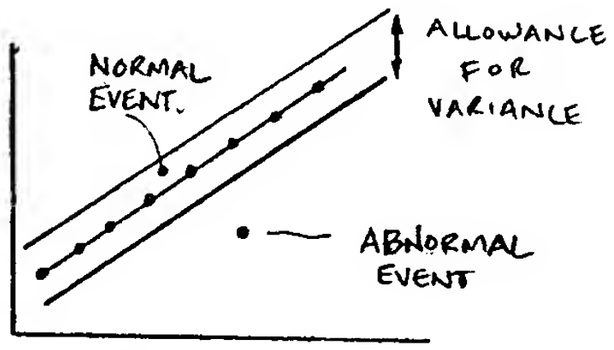

FIG. 7

STANDARD CONFIGURATION	EVENT CRITICALITY										AVERAGE BANDWIDTH (kb)	PROBABLE BANDWIDTH (kb)
	0	1	2	3	4	5	6	7	8	9		
1	15	20	25	30	35	40	45	50	75	100	35.7	25.8
2	20	20	25	30	50	50	50	75	100	110	35.7	30.1
3	25	30	35	40	60	60	60	85	110	120	35.7	38.6
4	30	40	45	50	70	70	70	95	120	130	35.7	47.1

FIG. 8

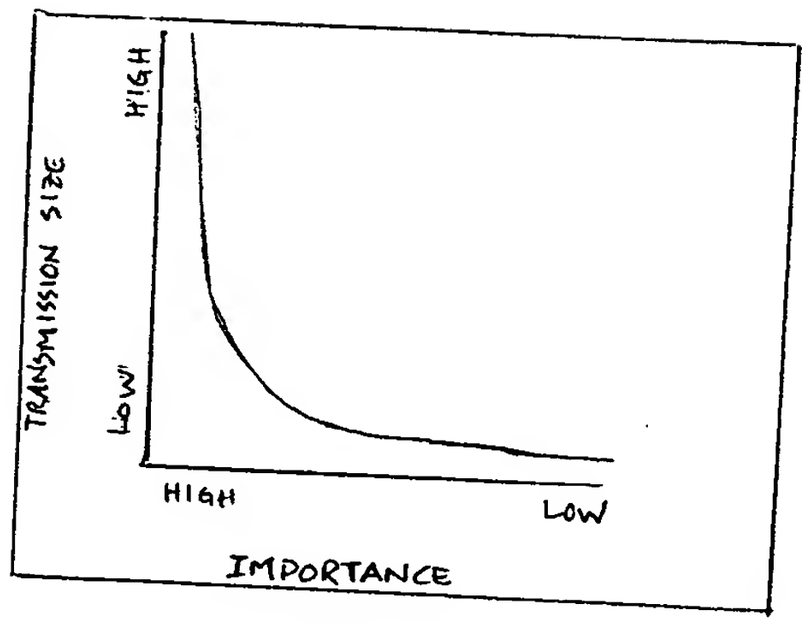
TRANSMISSION SIZE
HIGH
LOW
HIGH
LOW
IMPORTANCE

FIG. 9

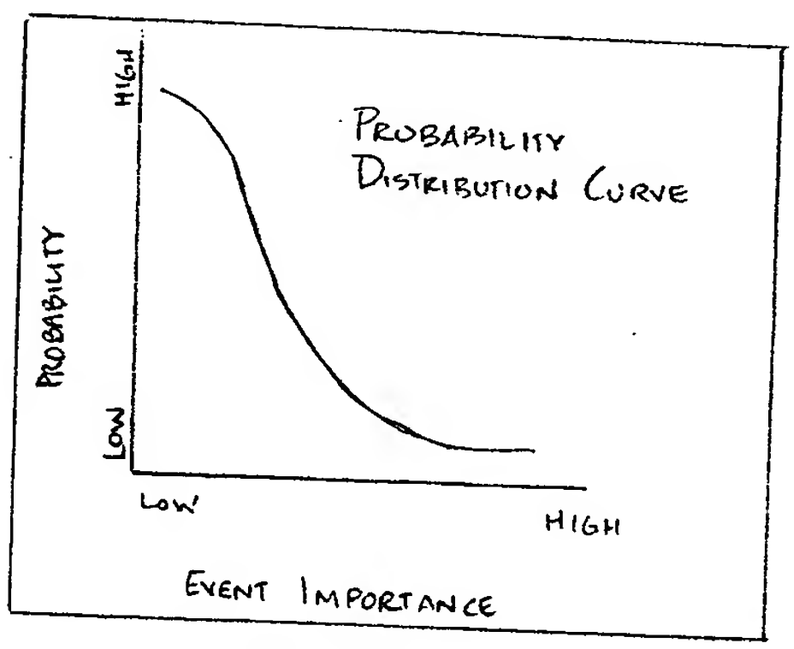
HIGH
PROBABILITY
LOW
PROBABILITY
DISTRIBUTION CURVE
LOW
HIGH
EVENT IMPORTANCE

FIG. 10